



~~the spacing between the cell walls is about 3  $\mu$ m.~~

Subt. B4  
5 6. A device as claimed in claim 3, wherein at least part of the side wall of the posts is tilted with respect to the normal to the plane of the first cell wall.

Sub A3  
~~7. A device as claimed in claim 6, wherein the tilt angle is in the range 5 to 7°.~~

Subt. C4  
10 8. A device as claimed in claim 6, wherein the tilt angle is about 5°.

Sub A4  
15 9. A device as claimed in claim 1, wherein each feature has a width in the range 0.2 to 3  $\mu$ m.

10. A device as claimed in claim 1, wherein the features are arranged in a random or pseudorandom array.

20 11. A device as claimed in claim 1, wherein the features are spaced from 0.1 to 5  $\mu$ m apart from each other.

Subt. D8  
25 12. A device as claimed in claim 1, wherein the liquid crystal material contains a surfactant.

Sub A5  
30 13. A device as claimed in claim 1, wherein the features are formed from a photoresist or a plastics material.

14. A device as claimed in claim 1, further including an analyser and a polariser mounted on the cell walls.

35 15. A device as claimed in claim 1, wherein the features are not treated with or formed from a material

which induces homeotropic alignment in liquid crystal materials.

16. A device as claimed in claim 1, wherein the surface alignment on the second cell wall comprises an array of features which have a shape and/or orientation to induce the liquid crystal director adjacent the features to adopt two different tilt angles in substantially the same azimuthal direction.

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17. A device as claimed in claim 1, wherein the liquid crystal material has a pleochroic dye dissolved therein.

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18. A device as claimed in claim 1, wherein the shape and/or orientation of the features is such as to favour only one azimuthal director orientation adjacent the features, and this orientation is the same for each feature.

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19. A device as claimed in claim 1, wherein the shape and/or orientation of the features is such as to favour only one azimuthal director orientation adjacent the features, and this orientation varies from feature to feature so as to give a scattering effect in one of the two states.

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20. A device as claimed in claim 1, wherein the inner surface of the second cell wall is provided with an alignment which induces the local liquid crystal director to adopt a planar alignment in substantially the same azimuthal direction induced by the alignment on the surface of the first cell wall.

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21. A device as claimed in claim 1, wherein the liquid crystal director twists between the first cell wall and

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